

Course Description	
Course Code	YS 420
Course Name	INTRODUCTION TO WIRELESS NETWORKS
Prerequisite Courses	None. However, those students who do have a background in computer networks and communications are likely to benefit from this course.
Language of the Course	The English
Course Coordinator	
Instructor(s)	
Course Assistants	
The aim of the course	To introduce students the basic concepts, technologies, the design issues of mobile and wireless networks
Course Content	An introduction to mobile and wireless networks

Weekly Course Content	
Week 1	Introduction to Mobile and Wireless Networks
Week 2	Mobile radio propagation for computer engineers
Week 3	Mobile radio propagation for computer engineers
Week 4	Cellular networks
Week 5	Cellular networks
Week 6	Multiple radio access for computer engineers
Week 7	Multiple radio access for computer engineers
Week 8	Midterm exam.
Week 9	Multiple division techniques
Week 10	Performance analysis of mobile and wireless Networks
Week 11	Performance analysis of mobile and wireless Networks
Week12	New trends in mobile and wireless networks
Week 13	Project Presentations
Week 14	Project Presentations
Week 15	Final exam.

Course Learning Outcomes	
1	Knowledge on the fundamentals of mobile and wireless networks
2	Knowledge on the basic concepts and the design issues of mobile and wireless networks
3	Knowledge on the mobile and wireless market, needs and challenges
4	Knowledge on different wireless networking technologies
5	Knowledge on performance evaluation criteria of wireless networks
6	-

Contribution of the Course to Program Qualifications		Contribution Level
01	The student will have the ability to apply analytical approach, mathematics and science knowledge in software and engineering issues.	3
02	The student will have the ability to identify, define, formulate and solve a problem in software and computer systems.	4
03	The student will have gains scientific research skills in software and engineering problems, has the ability to design a system, part or process.	5
04	The student will have the ability to use the design capability, techniques and tools required for engineering applications.	4
05	The student will have the ability to design, implement and interpret experimental work and software projects by analyzing the results.	5
06	The student will have the ability to work between disciplines and teamwork.	0
07	The student will have the ability to work in international environments and adapt to different cultures.	4
08	The student will have verbal and written communication skills in Turkish and English.	0
09	The student will have the awareness of the necessity of lifelong learning and the ability to realize it.	3
10	The student will gain knowledge of legal issues with the awareness of professional and ethical responsibility.	5
11	The student will have managerial skills (leadership, organization, time and risk management, quality awareness, efficiency, etc.).	5
12	The student will have the ability to participate in social activities, to acquire regular sports habits and to use time in the best way.	0
13	The student will have the ability to find unusual ways and produce projects.	5
14	The student will have professional self-confidence, being an entrepreneur and taking initiative.	3
15	It is sensitive about the problems of the age and looks after the national interests.	4

ECTS WORKLOAD			
	Number	Duration (hours)	Number*Duration
Face to face education	14	2	28
Out-of-class study time (pre-study, reinforcement)	10	1	10
Homeworks	0	0	0
Presentation / Seminar preparation	2	10	20
Quizzes	0	0	0
Preparation for midterm exams	1	5	5
midterm exams	1	2	2
Project (Semester assignment)	1	20	20
Lab	0	0	0
field work	0	0	0
Preparation for the final exam	1	10	10
Semester final exam	1	2	2
Research	0	0	0
TOTAL WORKLOAD			97
ECTS			3

Evaluation		
SEMESTER EVALUATION	Number	Contribution Percentage
Midterm	1	50
Quiz	0	0
Homework	2	50
SEMESTER TOTAL		100
Contribution rate of mid-term evaluations to success		40
Contribution rate of the final exam to success		60
GRAND TOTAL		100

RESOURCES	
Textbook	Introduction to Wireless and Mobile Systems by Dharma P. Agrawal and Qing-An Zeng
Helpful Resources	Wireless Communications & Networking, Vijay Garg